

Notice of Allowability

Application No.

09/980,194

Examiner

Daniel J Petkovsek

Applicant(s)

BRAUN ET AL.

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment received May 6, 2004.
2. ☒ The allowed claim(s) is/are 1-19.
3. ☒ The drawings filed on May 6, 2004 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

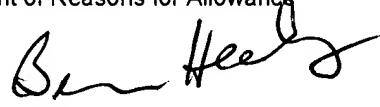
* Certified copies not received: _____

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date 5/6/04
4. ☐ Examiner's Comment Regarding Requirement for Deposit
of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☒ Interview Summary (PTO-413),
Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


Brian Healy
Primary Examiner

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DETAILED ACTION

This office action is in response to the amendment received May 6, 2004. In accordance with the amendment, claims 1 and 16-19 have been amended. The amendments to the specification have been acknowledged.

Information Disclosure Statement

1. The prior art documents submitted by Applicant in the Information Disclosure Statements filed on May 6, 2004, have been considered and made of record (note attached copy of forms PTO-1449).

Drawings

2. The corrected drawings were received on May 6, 2004. These drawings are acknowledged by the Examiner.

Allowable Subject Matter

3. Claims 1-19 are allowed. The following is an examiner's statement of reasons for allowance: the relevant prior art of record does not teach or reasonably suggest the specific use of a fiber optic device as claimed (the device itself is not novel), in which the specific use for the fiber optical device is for the *synthesis of oligonucleotide arrays by photo-lithographical exposure* with said device. The closest prior art of record (Goodman et al. U.S.P. No. 5,968,036) teaches the device, but does not teach or reasonably suggest the specific use in the synthesis of oligonucleotide arrays.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."



Brian Healy
Primary Examiner

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Response to Arguments


4. Applicant's arguments, see amendment, received May 6, 2004, with respect to the claim limitation, "the synthesis of oligonucleotide arrays by photolithographic exposure" have been fully considered and are persuasive. The rejections of 1-6, 8, 9, 12, 16, and 19 to Goodman et al. '036 have been withdrawn.

Conclusion


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Daniel J Petkovsek whose telephone number is (571) 272-2355. The examiner can normally be reached on M-F 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Daniel J Petkovsek
Examiner
Art Unit 2874

June 24, 2004


Brian Healy
Primary Examiner

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EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Mr. Edward Kriegsman (Reg. #33,529) on June 24, 2004.

The application has been amended as follows ([removed], added):

1. (Twice Amended) (Currently amended) A device for the synthesis of oligonucleotide arrays by photolithographic exposure of a surface, comprising:

at least one light source,

a plurality of light guided optical fibers for the photolithographic exposure of a surface to generate an oligonucleotide array on the surface, and

a control unit, wherein each of the optical fibers can be controlled independently of one another by light and/or light can be coupled to each of the optical fibers; independently of one another.

5. (Currently Amended) The device according to claim 1, further characterized in that the [substance] surface to be exposed [are] is introduced directly at the ends of the optical fibers.

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6. (Currently Amended) The device according to claim 1, further characterized in that the [substance] surface to be exposed [are] is arranged on a separate support.

7. (Currently Amended) The device according to claim 1, further characterized in that the [substance] surface to be exposed [are] is arranged on a separate support, whereby this support is a DNA chip, a PNA chip or a peptide chip.

17. (Twice Amended) The method according to claim 16, wherein said [biological substance] surface is DNA or PNA and further characterized in that the wavelength of said light is within a range sufficient to cause the deprotecting of nucleotides, nucleotide analogs and peptide nucleic acid and that between said light source and substrate, a plurality of optical fibers is positioned to which light may be selectively coupled to each one and that the surface on which the oligomer synthesis occurs is positioned precisely and rigidly behind said optical fibers and that the surface on which the oligomer synthesis occurs is positioned in a chamber in which the solutions and/or reagents necessary for the DNA or PNA synthesis are contained and are introduced onto the surface by other devices.

19. (Twice Amended) The method according to claim 16, further characterized in that a device for the photolithographic exposure of [biological substances] said surface is used for conducting the method, said device comprising at least one light source, a bundle of light-guide optical fibers, and a control unit, wherein each of the optical fibers can be

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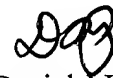
controlled independently of one another by light and/or light can be coupled to each of the optical fibers; independently of one another.

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Daniel J Petkovsek
Examiner
Art Unit 2874

June 24, 2004



Brian Healy
Primary Examiner